

### **REMARKS**

In response to the Office Action mailed December 24, 2003, Applicant respectfully requests reconsideration. To further the prosecution of this application, the indicated claim amendments are submitted with the following discussion.

Claims 1-12 were previously pending in this application. By this amendment, claims 1, 5-8, 10 and 11 have been amended. As a result claims 1-12 are pending for examination with claims 1 and 10 being independent claims.

#### **I. Claim Amendments**

The amendments to claims 1, 5-8, 10 and 11 have been made for the sole purpose of clarification, and not to overcome any art of record.

Support for the amendments to claim 1 may be found in the written description, for example, on pages 25-28, which include a description of a non-limiting example of an HDL model of an AND gate cell. Claims 5-8 depend from claim 1, and have been amended in accordance with independent claim 1.

Support for the amendments to claim 10 may be found, for example, on pages 25-28 of the written description. Claim 11 depends from claim 10, and has been amended to include proper claim dependency.

#### **II. Rejections Under 35 U.S.C. §112**

Claims 1-12 stand rejected under 35 U.S.C. §112, second paragraph, as purportedly being indefinite. Applicant respectfully traverses this rejection.

Claims 1 and 10 have been amended to clarify the claimed subject matter, as mentioned in section I of this amendment. In particular, claims 1 and 10 have both been amended to specify that the claimed plurality of signals is applied to the model and to specify running and re-running the model.

As amended, the claims are believed to satisfy the requirements of 35 U.S.C. §112, second paragraph. Thus, Applicant respectfully requests that the rejection of claims 1-12 under 35 U.S.C. §112 be withdrawn.

### III. Rejections Under 35 U.S.C. §103

Claims 1-12 stand rejected under 35 U.S.C. §103(a) as purportedly being unpatentable over U.S. Patent No. 5,394,346 to Milsom. Applicant respectfully traverses this rejection.

Milsom is directed to a simulation of an electronic system using high level macro models. The electronic system is viewed as a sequence of interconnected functional blocks. A high level macro model of each functional block is provided, as well as a low level description of each functional block (Abstract). The low level description is provided in terms of a detailed circuit and/or physical layout (Abstract). Prior to simulation of the functional block, processing operations are performed on the low level description of the functional block and parameters are extracted (Abstract). The parameters correspond to parameters of the high level macro model of the corresponding functional block (Abstract).

According to an aspect of Milsom, pre-processing of the low level description of the functional blocks is performed to extract parameters of the high level macro model of the functional blocks, as described above (col. 2, lines 52-61). The simulation of the electronic system then comprises applying input signals to the system and computing the behavior of the functional block using the extracted parameters of the high level macro models (col. 2, lines 61-66). The output signals of the system are then monitored to determine if the system behaves as anticipated (col. 2, lines 66-68).

#### *Claim 1*

Amended claim 1 recites a method of identifying an inaccurate model of a hardware circuit. Milsom fails to teach or suggest at least several limitations of claim 1. For example, Milsom fails to teach or suggest a method of identifying an inaccurate model of a hardware circuit comprising, *inter alia*, running the model of the circuit by applying a plurality of signals to the model to obtain a first set of expected results, said plurality of signals having **at least one abstract data type level**. Furthermore, Milsom fails to teach or suggest replacing the at least one abstract data type level with two or more levels having different values to thereby provide an expanded set of signals to apply to said model, as claimed. Moreover, Milsom fails to teach or suggest the claim limitation of **re-running the model by applying said expanded set of signals to the model** to obtain a second set of results. Therefore, Milsom fails to teach or suggest

comparing the first set of expected results with the second set of results and providing an output signal indicating that the model is inaccurate if the first set of expected results and the second set of results contradict. Milsom does no more than apply input signals to the system and monitor output signals to determine if the system behaves as anticipated.

Claim 1 patentably and non-obviously distinguishes over Milsom since Milsom fails to teach or suggest at least the limitations identified above. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §103 be withdrawn.

Claims 2-9 and 12 depend from claim 1 and are allowable for at least the same reasons.

*Claim 10*

Amended claim 10 recites a system for identifying an inaccurate model of a hardware circuit. Milsom fails to teach or suggest at least several limitations of claim 10. For example, Milsom fails to teach or suggest a system comprising, *inter alia*, means for running the model of the circuit by applying a plurality of signals to the model to obtain a first set of expected results, said plurality of signals having **at least one abstract data type level**. Furthermore, Milsom fails to teach or suggest a system further comprising means for replacing the at least one abstract data type level with two or more levels having different values to thereby provide an expanded set of signals to apply to said model, as claimed. Moreover, Milsom fails to teach or suggest a system further comprising means for **re-running the model by applying said expanded set of signals to the model** to obtain a second set of results, and means for comparing the first set of expected results with the second set of results and providing an output signal indicating that the model is inaccurate if the first set of expected results and the second set of results contradict.

Claim 10 patentably and non-obviously distinguishes over Milsom since Milsom fails to teach or suggest at least the limitations identified above. Accordingly, Applicant respectfully requests that the rejection of claim 10 under 35 U.S.C. §103 be withdrawn.

Claim 11 depends from claim 10 and is allowable for at least the same reasons.

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**CONCLUSION**

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,  
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